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In an era of renewed globalisation, securing monetary and financial stability requires more than a purely domestic focus. The Bank of England has a long history of co-operation with other central banks, and the Centre for Central Banking Studies has continued this tradition since its inception in 1990. The Centre supports the Bank’s core purposes by promoting monetary and financial stability internationally. It acts as a global forum where experts from central banks and regulatory authorities from all over the world can exchange views on the latest thinking in central bank policies and operations.

The Centre for Central Banking Studies has established relationships with central banks around the world, with over 125 different central banks taking part in our events in London and overseas each year.

Roughly 26,000 delegates from 174 central banks have participated in CCBS events since inception. Our distinguished alumni number several current Governors and Deputy Governors.

The programme of events at CCBS reflects the full range of the Bank of England’s new responsibilities, including macroprudential policy and the regulation and supervision of banks and insurance firms, as well as monetary policy. My aim is for the Centre to build on the Bank’s intellectual leadership and international relationships, and promote the sharing of new ideas and best practice in central bank policy and operations.
Celebrating 25 years of central bank co-operation, CCBS’s new focus is on the interactions between monetary policy, macroprudential policy and microprudential policy

Foreword by Gill Hammond, Director of the CCBS

2015 marks the 25th anniversary of the Centre for Central Banking Studies. Set up in 1990 under former Governor Sir Eddie George to co-ordinate technical co-operation with central banks in central and eastern Europe, the CCBS today acts as a global forum for sharing ideas and experiences, promoting best practice and building capacity in central banks and regulatory authorities around the world.

In recent years there have been enormous changes in the way that central banks pursue their mandates for monetary and financial stability and the Bank of England is no exception. CCBS events in London reflect the full range of the Bank of England’s new responsibilities for monetary policy, macroprudential policy and microprudential policy. CCBS is ideally placed in the heart of the Bank of England to promote the study of the interactions between these three strands of policy, and our Prospectus for 2015 reflects this focus.

The Prospectus provides full details of our 31 international seminars and information on how to apply. These seminars are provided free of charge and are open to experts from central banks and banking and insurance regulatory bodies around the world.

Our programme is shaped by the feedback we receive from delegates and contacts from the 150 or so central banks and regulatory authorities who attend our events. New or expanded events in 2015 include those on Shadow banking, Advanced analytics, Risk management of complex and emerging risks in banking supervision, and Management and governance. We have expanded the number of high-level seminars: in addition to our annual workshops for Chief Economists and Heads of Financial Stability, we have workshops for Heads of Banking Supervision, and Heads of Insurance.

We hope our expanded programme and new focus will be of interest to you and colleagues in your institution and look forward to welcoming many of you to London.

Gill Hammond
CCBS London events

The CCBS runs an extensive programme of international seminars, workshops and specialist events attended by experts from central banks and regulatory authorities from all over the world. Our events take place at the Bank of England in London. Most activities last from three to five days and cover many of the key policy and operational areas of central banking from a practitioner’s perspective. Speakers are experts in their fields from the Bank of England, the London financial markets, academia and, of course, delegates from other central banks.

Most of our seminars and workshops are aimed at mid-career central bank and regulatory personnel who can contribute to the event from their expertise and experience in their own country. These events reflect the latest thinking and research in the particular specialist area and examine the different approaches used by central banks around the world. The format is usually a mixture of lectures, discussions and case studies to facilitate the sharing of diverse experiences.

Some of our events, such as the expert forums or workshops for very senior officials, require a higher level of expertise and participation. Our aim here is to provide a forum where individual experts can have a frank exchange of views and experiences in confidential and highly interactive sessions.

Most CCBS international seminars are open to applicants from all central banks and eligible institutions. For more information on the application procedure, please see pages 34–35. www.bankofengland.co.uk/education/pages/ccbs/applicatio
nprocess.aspx.

CCBS London events for 2015 are listed in date order on page 5 and grouped by category on pages 6–7. www.bankofengland.co.uk/education/Pages/ccbs/events/event
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London events in 2015 by date

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## London events in 2015 by category

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Central bank liquidity and the balance sheet

19 – 23 January 2015

Event Director: Garreth Rule
Apply by: 14 November 2014

Central banks typically manage monetary policy by controlling the cost and availability of liquidity across their balance sheets. Understanding the composition of the central bank’s balance sheet and what factors influence its evolution is crucial to understanding how central banks implement monetary policy effectively.

This event will provide an overview of liquidity forecasting techniques and discuss how a central bank should respond to the differing challenges of a surplus or a shortage of liquidity.

Content

The following key topics are likely to be covered:

• an analysis of the central bank’s balance sheet, including currency in circulation, government balances and net foreign assets;
• the sources of surplus liquidity; and
• the different implications for monetary operations of a surplus of liquidity and a shortage of liquidity.

Target group

Candidates should be central bankers who are working in monetary operations or liquidity forecasting areas. It is expected that candidates will be drawn from a range of industrialised, emerging market and developing economies.

Format

The event requires a high level of participation, including group discussions and group exercises. Presentations will be given by experts from the Bank of England. Several participants will also be invited to give presentations in their fields of expertise.
Macroprudential policy

27 – 29 January 2015
Event Director: Somnath Chatterjee
Apply by: 2 December 2014

The stability of the financial system as a whole depends crucially on the dense web of connections between financial firms and the strategic interactions and externalities that these linkages create. Consequently, there is now a growing consensus among the policymaking and academic communities on the need to develop a macroprudential approach to financial stability policy. The crisis has led to a great deal of thought about what this type of policy could realistically achieve, what tools and techniques could be used to implement it and how it could interact with central banks’ other responsibilities.

In this seminar we offer central bankers with expertise in this field the opportunity to deepen their knowledge of the current challenges to macroprudential policy.

Content
The topics covered in the event will fit within the following broad themes:

• the appropriate objectives for macroprudential policy and the various challenges to operationalise it;
• a review of the various macroprudential instruments to manage network and procyclicality risks, and their transmission mechanisms; and
• the interplay between macroprudential tools and central banks’ other policy instruments.

Target group
Candidates will be experienced central bankers directly involved in macroprudential, regulatory work or related analysis, whether from industrialised, emerging market or developing economies. Participants must have a good understanding of their central bank’s approach to macroprudential policy so they can share it with their peers.

Format
Presentations will be given by experts from the Bank of England and elsewhere. The event requires a high level of participation. Participants may be invited to give presentations in their fields of expertise.
Interaction of monetary and financial stability policy

2 – 4 February 2015

Event Directors:  David Barr and Andrew Blake
Apply by:  8 December 2014

The twin goals of monetary and financial stability are clearly mutually dependent. Their interaction extends from the consequences that failing to achieve either one has for the difficulty of achieving the other, to potential conflicts, overlaps and complementarities between their respective instruments. This seminar aims to examine the sources and implications of the relationship between monetary and financial policy.

Content
The event will include technical and discursive analyses of a range of topics and issues that are likely to include:

• the role of asset prices in the setting of monetary policy instruments;
• the impact of monetary and financial instruments on the real economy;
• the role of financial markets in the generation of business cycles;
• the monetary transmission mechanism in times of financial disruption;
• the extent to which monetary and financial stability can be operated independently;
• the operational relationships between monetary and financial policy makers, using the Bank of England’s MPC and FPC as the central example; and
• the usefulness of monetary aggregates as indicators, and short-term interest rates as instruments, in a world of shadow banking.

Target group
This event is aimed at economists from central banks and regulatory authorities with interests in monetary policy, macroprudential policy and financial stability.

Format
Presentations will be given by experts from the Bank of England, academics and financial market participants. The event requires a high level of participation and there will be plenty of scope for discussions and interactions. Participants are invited to give presentations in their fields of expertise or on their country’s experience in this area.
The global financial and economic crisis has challenged the conventional wisdom about monetary policy frameworks. This seminar considers the questions now confronting central banks: What lessons have we learned from the crisis? Is inflation targeting sufficient? What are the linkages between monetary policy and macroprudential policy, and between monetary and fiscal policy?

Content

The following key topics are likely to be covered:

- lessons and challenges for monetary policy;
- inflation targeting and other frameworks;
- unconventional monetary policy;
- modelling and forecasting for monetary policy;
- combining monetary policy and financial stability objectives; and
- communicating about monetary policy in a fast changing world.

Target group

Candidates will be economists from central banks interested in the theoretical and practical aspects of monetary policy, whether from industrialised or emerging market and developing economies. Candidates should be working in the monetary policy area of their central bank, or be involved in related research, and have some experience of the subject in their own country.

Format

Presentations will be given by experts from the Bank of England and elsewhere. Discussions of the experience of different countries will form an important part of the event. The seminar requires a high level of participation, including group discussions and exercises. Participants are invited to give presentations in their fields of expertise or on their country’s experience.
Financial supervision and capital adequacy

3 – 5 March 2015

Event Directors: Matthew Pegg and Somnath Chatterjee
Apply by: 12 December 2014

The financial crisis has raised questions about the design of capital requirements and concerns about the level of capital in individual banks and the banking system. Regulators are rethinking the more fundamental role of regulatory capital requirements in affecting bank behaviour and market perceptions about bank risk. That question has been prompted by the need to address several market failures that threaten financial stability more broadly. Basel III represents significant new capital, leverage and liquidity requirements. This event will analyse the stricter definition of eligible capital and capital buffers as indicated in Basel III and the use of the leverage ratio as a backstop to additional capital requirements.

Content

The following topics are likely to be covered:

• the determination of firm capital requirements;
• the implementation of Basel III (CRD IV);
• the leverage ratio; and
• time-varying capital requirements.

Target group

This seminar is aimed at experienced prudential supervisors and central bankers, whether from industrialised, emerging market or developing economies. Participants must have a good understanding of their organisation’s approach to supervision so they can engage fully in the discussions during the seminar.

Format

Presentations will be given by experts from the Prudential Regulation Authority, Bank of England and elsewhere. The event requires a high level of participation, and several participants may be invited to give presentations on their country’s approach in this area.
Risk management and the prudential regulation of banks and insurance companies

18 – 20 March 2015

Event Director: Paul Singh
Apply by: 18 December 2014

Risk management is a key ‘second line of defence’ for firms, regulators and central banks seeking to ensure the safety and soundness of the financial system. With firms trading increasingly complex products, and a wealth of financial and technical innovations being used to seek better combinations of risk and return, proactive assessment and management of risk by firms and supervisors is more important than ever before. This event seeks to explore key areas of extant and emerging risks, along with the techniques that practitioners employ to identify and deal with them.

Content
The event will aim to discuss the management of various categories of risk faced by retail banks, investment banks and insurance companies, including those generated by macroeconomic, political and social developments. Specific topics are likely to include:

• trading risks and hedging, options pricing;
• assessment, management, and supervision of risk-taking in regulated firms;
• insurance risks, including the problem of predicting longevity and mortality; catastrophe risks; monetising embedded value;
• operational risk, cyber risk initiatives in the United Kingdom;
• the use of stress testing at different levels as a tool in risk management;
• credit risk; and
• liquidity risk.

Target group
This seminar is aimed at central bankers, regulators and supervisors who are actively involved in the assessment of risk and risk management within the firms they regulate. The seminar will also be of value to those interested in understanding the complex and emerging risks to which firms are exposed, and in techniques that allow these to be managed as part of an effective regulatory regime.

Format
Presentations will be given by experts from the Prudential Regulation Authority, Bank of England and elsewhere. The event requires a high level of participation, and several participants may be invited to give presentations on their country’s approach in this area.
Introduction to modelling for central bankers

23 – 27 March 2015

Event Directors: Ole Rummel and Paweł Zabczyk
Apply by: 23 December 2014

Models are essential to develop rigorous, coherent and robust frameworks for economic thinking, analysis and policymaking in central banks. This one-week seminar will introduce central bankers to economic modelling techniques for monetary policy purposes by reviewing various modelling approaches: theoretical models of the dynamic stochastic general equilibrium (DSGE) type and estimated time-series models, including (semi) structural equation models and vector autoregressions. Practical exercises will follow theoretical sessions to provide some hands-on experience in estimating, manipulating, interpreting and applying these models in a variety of policy contexts.

Content

The following topics are likely to be covered:

- basic optimization techniques;
- model microfoundations;
- models of the business cycle, including models with financial frictions;
- simple solution methods;
- input data preparation and manipulation;
- construction and estimation of small multivariate econometric models; and
- model evaluation and policy analysis using estimated models.

Target group

The event is aimed at central bankers who are new to, or have limited experience of, economic modelling. Candidates should be comfortable with linear algebra and basic calculus. A good command of technical English is essential.

Format

Presentations and practical sessions will be given by Bank of England experts on econometrics and economic modelling. The lectures will be combined with a series of exercises that will focus on implementing the main techniques and tools. There will be plenty of scope for discussions and interactions.

Specialist software such as EViews for estimation and forecasting and Dynare for solving and simulating models will be used extensively.
Empirical finance for monetary policy

13 – 17 April 2015
Event Director: Garreth Rule
Apply by: 5 January 2015

Central banks rely increasingly on the empirical analysis of financial markets to analyse the state of the economy and the impact of policy actions. This one-week event will provide a rigorous overview of the foundations of empirical finance and an exposition of selected topics vital to central bank analysis for monetary policy.

Content
The following topics are likely to be covered:

• the construction and analysis of yield curves and other term structures;
• volatility modelling and forecasting; and
• the use of option prices to infer probability density functions of expectations of the underlying asset’s future properties.

Lectures will typically be followed by computer-based exercises to illustrate the relevant applied financial econometric and empirical finance techniques.

Target group
Candidates will be central bankers with some knowledge and experience of quantitative financial economics and its applications to central banking. They should be literate in economics and mathematics with a good command of technical English. Econometric skills are important: candidates should be comfortable with estimating least-squares equations.

Format
Presentations will be given by experts from the Bank of England. The event requires a high level of participation, including group discussions and exercises.
Management and governance

11 – 13 May 2015
Event Directors: Paul Singh and Matthew Pegg
Apply by: 2 February 2015

Some of the largest and most publicised financial services firm failures have been attributed to poor management and corporate governance. This has resulted in an increased focus on Board effectiveness, remuneration, governance structures, senior management expertise and culture.

The importance of good corporate governance has been well documented over the past two decades with high-profile firm failures used as examples. The 'Combined Code' has amalgamated the findings of several inquiries to form the UK Corporate Governance Code whilst financial services regulators and the stock exchange have also increased their focus on corporate governance. Further regulatory obligations are now extending to CRD IV and Solvency II ensuring this theme remains on the agenda of all stakeholders. This seminar will aim to provide the participants with an understanding of the differing approaches to corporate governance from different stakeholders and the regulatory tools used to ensure effectiveness.

Content
This event will cover the broad themes:

• why is good corporate governance important?
• how corporate governance is regulated;
• the importance of Board effectiveness in the effective risk management of firms;
• management expertise, culture and controls;
• the UK approved persons regime and significant influence exerted by senior executives; and
• remuneration codes as an incentive.

Target group
This seminar is aimed at experienced prudential supervisors or central bankers, whether from industrialised, emerging market or developing economies. Participants must have a good understanding of their organisation’s approach to corporate governance so they can engage fully in the seminar’s discussions.

Format
Presentations will be given by experts from the Bank of England and elsewhere. The event requires a high level of participation, and several participants may be invited to give presentations in relation to their country’s approach in this area.
Research forum on macro-finance and macroprudential regulation

27 – 29 May 2015
Event Directors: Andrew Blake and David Barr
Apply by: 18 February 2015

Policy architecture is now radically different to the prevailing orthodoxy of a few short years ago. Then price stability was often the sole objective pursued by central banks, and this was seen as a sufficient condition for financial stability. If there were financial market concerns, these could be managed appropriately or left to resolve largely by themselves with little harm to the rest of the economy. Now it is widely agreed that monetary and macroprudential policies need to be considered in tandem, and their potential interaction taken into account. This has caused an explosion of interest in appropriate models, with macro-financial effects built into new models and the incorporation of new macroprudential instruments.

Content
This event is an opportunity for practitioners and academics to come together and explore new approaches to the analysis of macro-financial and macroprudential issues. It is anticipated that papers on sectoral modelling, policy regimes and co-ordination issues will be presented.

Target group
This event is intended for active researchers who wish to share their research and learn from the experience of others. Potential participants with relevant papers to present will be given priority, although it is anticipated that there will also be space for those who are keen to learn.

Format
The event will consist of research presentations from invited academics actively working in the field and event participants themselves. There are also likely to be papers from researchers at the Bank of England and other international organisations.
Analytical tools for financial supervision and risk management

1 – 5 June 2015

Event Directors: David Barr and Somnath Chatterjee
Apply by: 23 February 2015

Financial supervision, and risk management more generally, make extensive use of tools derived from mathematics, statistics and probability theory. This event introduces the core toolkit with the aim of allowing participants to understand and discuss the key concepts and their applications without having to delve into the advanced mathematics required of risk management professionals.

Content
The event is expected to cover a wide range of topics including:

- extreme value theory;
- linear and non-linear correlation;
- Value-at-Risk;
- network analysis and agent-based models;
- principles of derivatives pricing with applications to interest rate and credit derivative swaps; and
- Monte Carlo methods.

Target group
This event is aimed at economists and others with a mathematical background who wish to improve their understanding of existing risk management techniques, and who may be involved in analysing and attempting to improve regulatory regimes at a policy level. (It is not aimed specifically at those involved in the practical aspects of implementing regulations or supervisory requirements, as in, for example, the gathering of data or in visiting financial institutions.)

Format
Topics will be presented by Bank of England experts, academics and financial market participants. These will be complemented by numerical, computer-based exercises.
Joint CCBS-FRBNY policy forum on the current state of monetary operations

8 – 10 June 2015

Event Directors: Garreth Rule (CCBS) and Howard Howe (FRBNY)
Apply by: 2 March 2015

Monetary operations have always been essential to the effective implementation of a central bank’s monetary policy. Following the onset of the global financial market crisis in August 2007, standard monetary operations were extended and expanded in response to market dislocations. For some central banks, market stresses have eased, permitting the return to ‘normal’ conditions drawing on lessons learned during the crisis; for others, monetary operations are still being adapted and updated to respond to ongoing market and economic developments.

The aim of this workshop is to allow those responsible for the design and implementation of such policies to deepen their theoretical understanding of monetary operations and to compare and contrast experiences with their peers.

Content
The following topics will be covered:

- the current state of monetary operations;
- balancing monetary policy and financial stability goals within central bank money market operations; and
- the timing of communicating and implementing new money market operations.

Target group
Candidates will be experienced central bankers who are directly responsible for the design and implementation of monetary operations within their respective central banks. It is expected that candidates will be drawn from a range of industrialised, emerging market and developing economies.

Format
Presentations will be given by experts from the Bank of England, the Federal Reserve Bank of New York (FRBNY) and others, including financial market participants and academics. The event requires a high level of participation, including group discussions and several participants will be invited to give presentations on their respective experiences.
Structure of financial markets

15 – 19 June 2015

Event Director: Somnath Chatterjee
Apply by: 9 March 2015

The recent crisis reinforced the importance of having a clear appreciation of how financial markets work. In this seminar we aim to equip participants to think more deeply about the structure of financial markets by providing some background theory, reviewing the structure of several specific markets and discussing the overall risk and performance/effectiveness of the financial system.

Content
The seminar will focus on the following topics:

• risk premia in financial markets;
• asset pricing;
• equity premia and credit spreads;
• derivatives markets and CCPs; and
• the repo market.

Target group
This seminar is aimed at those who wish to increase their understanding of the pricing of financial securities and the characteristics of financial instruments in capital markets, money markets and derivatives markets. Candidates should have some knowledge of market operations and risk management techniques. It is expected that candidates will be drawn from a range of industrialised, emerging market and developing economies.

Format
Presentations will be given by Bank of England experts, academics and market practitioners from global banks.
Advanced analytics

22 – 23 June 2015

Event Director: Lyndsey Pereira-Brereton
Apply by: 16 March 2015

Rapid changes to available data, software and analytical techniques now allow central banks to understand issues in a much more sophisticated and complete way than was possible even a few years ago. Increasingly, central banks are able to make creative use of data, by applying innovative analytical and visualisation techniques, to help better inform policy and business decisions.

This event will showcase examples, both from around the Bank of England and externally, where advanced analytics have been used on large and varied data sets to provide a deeper and more comprehensive answer to important policy and business relevant questions.

Content

The following topics are likely to be covered:

- examples of data mining projects on large multi-sourced structured and unstructured data sets;
- demonstration of how different analytical and visualisation techniques have enabled more insightful analysis and answering of policy and business questions; and
- potential pitfalls and pointers on these novel types of analysis.

Target group

Candidates will be central bankers and regulators interested in exploring alternative techniques for analysing data, and sharing best practise on how to achieve this.

Format

The event will mainly consist of case studies presented by Bank of England staff and industry experts, complemented by interactive sessions and roundtable discussions.
Applied Bayesian econometrics for central bankers

28 July – 5 August 2015

Event Directors: Andrew Blake and Gabor Pinter
Apply by: 21 April 2015

Computational advances have greatly facilitated the use of Bayesian estimation and simulation techniques. The main advantage of these techniques is that they provide precise results in small samples and allow researchers to incorporate off-model information into the estimation procedure. In addition, these techniques allow for the easy development of richer specifications, i.e., models with a large number of parameters to estimate or parameters that vary over time.

This event is an introduction to some of the techniques in Bayesian econometrics which can be useful for modelling and forecasting in central banks. It will provide an overview of the theory and then focus on practical implementation through computer-based exercises.

Content

The seminar will be taught from the perspective of the practitioner with the aim of discussing techniques that can improve upon classical econometric methods, or are more convenient alternatives. The topics covered are likely to include:

- introduction to Bayesian analysis and Gibbs sampling;
- Gibbs sampling for linear regression, vector autoregressions and vector error-correction models;
- Gibbs sampling for state-space models including time-varying parameter and dynamic factor models;
- non-linear regression models: the Metropolis-Hastings algorithm; and
- Bayesian estimation of dynamic stochastic general equilibrium models.

Exercises will show how Bayesian methods may be useful when available time series data are limited or when economic relationships are subject to structural shifts.

Target group

This seminar is aimed at candidates working in the monetary policy, financial stability and research departments of central banks. They should have experience of classical econometrics. Candidates must be proficient in least-squares estimation and have some knowledge of linear algebra and maximum likelihood estimation. Knowledge of programming in Matlab is essential for this course.

Format

This event consists of lectures on the underlying theory, followed by exercises applying the theoretical models.
The shadow banking system

7 – 11 September 2015
Event Director: David Barr
Apply by: 1 June 2015

A significant proportion of the economy’s total credit intermediation now takes place in the ‘shadow banking system’. The rise of shadow banks has had profound implications for the structure of the traditional banking system and for the wider economy. In this seminar we will aim to analyse how the new system operates, explore its impact on the financial system more generally, and consider its implications for financial regulation.

Content
The following topics will be covered:

• the structure of the new collateral-based banking system;
• the impact of the new banking system upon the financial system more generally; and
• the challenges that the new banking system poses for regulation and monetary policy.

Target group
This seminar is aimed primarily at central bankers and regulators who wish to improve their understanding of how the shadow banking system works and of its implications for financial stability and monetary policy.

Format
Presentations will be given by experts from the Bank of England, academia and financial markets. Participants will be invited to make short presentations about shadow banks in their own country.
Central bank communication in a changing world

14 – 16 September 2015

Event Directors: Gill Hammond and Joe Ganley
Apply by: 9 June 2015

Innovations in social media and information technology provide both opportunities and challenges for central banks’ communication strategies. The changed landscape of central banks’ operations and policies also provides challenges in communication to a wide set of stakeholders. This workshop provides a forum for central bank experts in communication to deepen their understanding of the issues and share their experiences.

Content
The following key topics are likely to be covered:

- developing a communication strategy;
- forward guidance;
- opportunities and risks of social media
- managing key stakeholder relationships, communicating with the public, parliament and media; and
- what role should the central bank play in public education?

Target group
The workshop is aimed at experienced central bank personnel working in the Press Office or other external communication function.

Format
The workshop will be highly interactive, allowing participants to discuss their own experiences and share expertise. The format will be round-table discussions rather than formal presentations. External speakers will be invited from the media and markets.
Forecasting in central banks

21 – 25 September 2015

Event Directors: Andrew Blake and Ole Rummel
Apply by: 15 June 2015

Given the long and uncertain lags in the monetary transmission mechanism, all central banks have to forecast the main variables that they are interested in. But academics and policymakers alike have found that some of the variables of interest, such as inflation, have become more difficult to forecast, not least because of changes in the underlying data-generating process. Periods of stability in underlying macroeconomic variables can make it even more challenging for a central bank forecaster to provide value-added beyond the simplest univariate model. This event will combine lectures on forecasting theory with complementary computer-based exercises.

Content

The following topics are likely to be covered:

- the econometric modelling and forecasting of inflation and growth;
- formulating and using varieties of mechanical, statistical, semi-structural and structural forecasting models;
- forecasting at different forecast horizons;
- tools for forecast evaluation and combination;
- density forecasting, including constructing and using a fan chart using both classical and Bayesian methods; and
- forecast communication.

Target group

Candidates will be central bankers interested in learning about how modern econometric methods can be used to forecast and how to construct and interpret fan charts as a tool for communicating monetary policy goals.

Format

Presentations will be given by Bank of England experts, academics and financial market participants. The lectures will be complemented by a series of exercises that will focus on the implementation of the main techniques and tools. There will be plenty of scope for discussion and interaction.
Monetary operations

28 September – 2 October 2015

Event Director: Garreth Rule
Apply by: 22 June 2015

Monetary operations are essential to the effective implementation of a central bank’s monetary policy. This seminar will look at recent developments in money market operations. In addition, it will consider how monetary operations interact with a central bank’s financial stability and regulatory mandates.

Content
The following topics are likely to be covered:

- review a central bank’s balance sheet in the light of monetary operations and risk tolerances;
- success criteria: monitoring performance of operational structures;
- recent and potential future revisions to the framework;
- collateral requirements and risk management techniques;
- a detailed review of the Bank of England’s monetary operations; and
- the pursuit of financial stability goals through money market operations.

Target group
Candidates will be central bankers, including money market dealers and analysts, who are either involved in day to day monetary operations or undertake analysis of them.

Format
Presentations will be given by experts from the Bank of England and elsewhere. A high level of participation is required, especially with regard to discussion about key lessons learned from the changes to monetary operations as a result of the financial crisis.
Systemic risk assessment: identification and monitoring

5 – 9 October 2015
Event Director: Somnath Chatterjee
Apply by: 29 June 2015

Achieving macroeconomic stability requires the identification of systemic risk in the financial system and of the factors that are driving it. Efforts are now underway in central banks and regulatory authorities to put systemic risk assessment onto a sounder, more productive and more measurable footing. In this seminar we survey and evaluate some of these new approaches.

Content
The following topics will be covered:

• credit and asset price cycles;
• statistical measures of systemic risk:
  o Value-at-Risk (VaR)
  o Conditional Value-at-Risk (CoVaR)
  o Marginal Expected Shortfall (MES);
• network models for systemic risk assessment; and
• macroeconomic stress testing.

Target group
This seminar is aimed at central bankers and regulators actively involved in developing or evaluating systemic risk assessment models, or those who use systemic risk models as an input into their tasks and wish to acquire a deeper understanding of how they work.

Format
Presentations will be given by experts from the Bank of England and guest speakers.
Business model analysis for financial supervision

12 – 14 October 2015

Event Directors: Matthew Pegg and David Barr
Apply by: 6 July 2015

Business model analysis forms an important part of the Bank of England’s Prudential Regulation Authority approach to supervision. Supervisors of banks, insurers and significant investment firms aim to understand a business model’s sustainability and key vulnerabilities. The analysis includes an assessment of where and how firms make money and the risks the firm is exposed to. Peer comparison is an essential component, putting an individual firm’s business model in context, and providing an understanding of common sectoral risks that have the potential to affect financial stability. Business model analysis is used to focus supervisory strategy. This event will analyse different approaches to business model analysis for financial supervision for different types of firm, giving delegates an opportunity to share ideas and expertise.

Content
The following key topics are likely to be covered:

- approaches to business model analysis for banks, insurers and significant investment firms;
- using the results of analysis to focus supervisory activity; and
- flexible and proportionate approaches to business model analysis that can be applied to firms of different size and complexity.

Target group
This seminar is aimed at experienced prudential supervisors, whether from industrialised, emerging market or developing economies. Participants must have a good understanding of their organisation’s approach to supervision so they can engage fully in the seminar’s discussions.

Format
Presentations will be given by experts from the Bank of England’s Prudential Regulation Authority and elsewhere. The event requires a high level of participation, including case studies. Several participants may be invited to give presentations on their countries’ approach in this area.
The international monetary and financial system

19 – 23 October 2015

Event Director: Ole Rummel
Apply by: 13 July 2015

Several years after the financial crisis there is still an urgent debate about the international monetary and financial system, and the merits of different policies such as the provision of international liquidity, an international store of value, and global imbalances and their adjustment mechanism. This event will discuss the functioning of the existing international monetary and financial system, defined by the interplay between exchange rate arrangements, capital flows and the collection of institutions, rules and conventions that govern its operation and its effectiveness. It aims to disseminate recent research and assess the various proposals to improve the functioning of the system.

Content

The event will cover both theoretical and empirical analyses of the functioning of the international monetary system. The following topics are likely to be covered:

• the interplay between domestic policy frameworks and the international monetary and financial system;
• the role of ‘rules of the game’ and the trade-off between interventions by supranational authorities and market-based adjustments;
• the emergence of new stakeholders in the international monetary and financial system and the consequences of operating and co-ordinating in a more multipolar world;
• proposals for providing international liquidity in times of crisis;
• the international role of the US dollar as a reserve currency and international store of value and proposals to facilitate global reserves adjustment;
• sovereign debt issues and mechanisms for sovereign debt re-structuring;
• the role of exchange rate regimes and capital flows; and
• the role of private capital markets in the international monetary and financial system.

Target group

Candidates will be central bank economists engaged in either setting, researching or formulating all aspects of the international monetary system.

Format

Presentations will be given by Bank of England experts, academics and financial market participants. The event requires a high level of participation and there will be plenty of scope for discussions and interactions. Participants are invited to give presentations in their fields of expertise or on their country’s experience in this area.
Financial frictions

26 – 30 October 2015
Event Directors: Gabor Pinter and Pawel Zabczyk
Apply by: 20 July 2015

The recent financial crisis has made it clear that macroeconomic models need to allocate a more prominent role to the financial sector. This five-day seminar introduces participants to some of the key related concepts and shows how they can be studied in a dynamic stochastic general equilibrium (DSGE) setup. To build an understanding of the implications of financial frictions for business cycle fluctuations and monetary policy, theoretical sessions will be followed by hands-on exercises — equipping participants with the skills necessary to develop and use such models in their work.

Content
The topics covered are likely to include:

• an overview of aspects of the data justifying an analysis of financial frictions;
• different ways of deviating from the frictionless benchmark:
  o costly state verification
  o collateral constraints
  o costly enforcement;
• models of financial intermediation; and
• financial frictions and the monetary transmission mechanism.

Hands-on sessions will reinforce the concepts and methods taught in lectures.

Target group
The event is aimed at central bankers who are new to, or have limited experience of, models with financial frictions. Some prior experience of DSGE modelling would be desirable, and knowledge of Matlab and/or Dynare would be an asset in the practical part of the seminar.

Format
Lectures will be given by Bank of England experts and guest speakers. Theoretical sessions will be accompanied by computer-based work, where the methods will be implemented. There will be lots of scope for interaction and discussion.
Business continuity management

3 – 5 November 2015

Event Directors: David Wetherell and Gill Hammond
Apply by: 28 July 2015

Central banks are key participants in the economies and financial sectors of their countries. A central bank inevitably plays a significant role in the response to a major operational disruption affecting the financial sector. Pro-active business continuity management (BCM) is therefore essential to ensure that the central bank can fulfil its responsibilities. The objective of this workshop is to give participants the opportunity to discuss the key business continuity issues facing their central banks, review their own bank’s business continuity strategy and programme, and identify ways in which improvements could be made.

Content

The following themes are likely to be covered:

- identifying and assessing the key business continuity issues facing central banks;
- establishing a business continuity strategy, including the central bank’s own arrangements, to ensure appropriate resilience and continuity of its own business;
- implementing, developing and embedding BCM in the central bank;
- setting a testing strategy and delivering a testing programme, including crisis management exercising;
- analysing the role of all authorities involved in BCM;
- links with business continuity and human resources;
- cyber — impact on payment systems and infrastructure;
- interacting with the financial sector on business continuity and resilience; and
- planning for effective co-ordinated crisis management, including a crisis communications strategy.

Target group

The event is aimed at heads of the BCM function in central banks or regulatory authorities, and senior managers and advisers who are actively engaged in implementing BCM within their institution. Participants must have a good understanding of their organisation’s priorities and how risk assessment forms part of a business continuity strategy, and have sufficient experience within their institution to influence change.

Format

Participants and experts from the Bank of England and elsewhere will be invited to provide short presentations and case studies. This is an interactive workshop: participants will be asked to actively participate in discussions and share their experience, to work in groups to draw up outline plans and solutions, and share them with all participants for analysis and comment.
Microprudential supervision of banks and insurers

23 – 25 November 2015
Event Director: Matthew Pegg
Apply by: 17 August 2015

In recent years governments and financial regulation authorities have reviewed and revised regulatory structures. The landscape of regulation has changed with new regulators being created both nationally and internationally. These changes bring new approaches to financial supervision which is becoming more intensive and intrusive, with increasing focus on financial stability, critical economic functions and resolution. The work of prudential supervisors has also moved from point in time to forward-looking assessments including business model analysis.

This seminar will improve participant’s understanding of the changing approach to supervision, and provide an opportunity to share ideas and expertise.

Content
The topics covered in the event will fit within the following broad themes:

- models of financial services regulation including the ‘twin peaks’ model adopted in the United Kingdom;
- a judgement-based, forward-looking approach to prudential supervision;
- the interplay between microprudential and macroprudential regulation; and
- financial stability as a focus for microprudential regulators, including resolution powers.

Target group
This seminar is aimed at experienced prudential supervisors or central bankers, whether from industrialised, emerging market or developing economies. Participants must have a good understanding of their organisation’s approach to supervision so they can engage fully in the seminar’s discussions.

Format
Presentations will be given by experts from the Bank of England’s Prudential Regulation Authority. The event requires a high level of participation, and several participants may be invited to give presentations in relation to their country’s approach in this area.
Economic modelling and forecasting

30 November – 11 December 2015

Event Directors: Gabor Pinter and Pawel Zabczyk
Apply by: 24 August 2015

The lags in the transmission mechanism of monetary policy mean that policymakers must forecast the future path of the economy. Accurate forecasts are only possible with a clear understanding of the structure of the economy and the shocks affecting it. This two-week seminar aims to improve participants’ understanding of current modelling strategies and forecasting techniques.

Content

The event is a combination of lectures on the theory and methods of policy analysis and design, practical problems in modelling and forecasting and computer-based exercises. The following topics are likely to be covered:

• techniques for modelling unobserved economic components, state-space models and the Kalman filter;
• models of volatility and non-linearity;
• Bayesian estimation;
• dynamic stochastic general equilibrium (DSGE) models.
• panel data methods;
• vector autoregressions (VARs), structural VARs and their identification, and recent extensions of VAR modelling, such as Bayesian VARs, factor-augmented VARs and DSGE-VARs;
• estimation using the generalised method of moments (GMM);
• statistical and computational issues in the construction of fan charts; and
• financial frictions.

The event focuses on deriving and interpreting estimates of equations used to construct small models, which can then be applied to monetary policy. In many cases, estimated models will then be used for forecasting purposes. Econometric and modelling software such as Matlab for estimation and forecasting and Dynare for model solution and simulation will be used extensively.

Target group

The event is aimed at economists working in quantitatively oriented departments of their central bank. They should have some experience of econometrics and a background in economics. Candidates must be proficient in least squares estimation. Knowledge of other techniques is desirable but not essential as they will be discussed during the event.

Format

Presentations will be given by experts from the Bank of England and academia. The two-week seminar offers scope for active participation through practical exercises. In addition, seminar participants should come prepared to share their practical modelling and forecasting experiences.
How to apply

Full details of our web-based electronic application process can be found at www.bankofengland.co.uk/education/ccbs/index.htm.

Online Help and Frequently Asked Questions (FAQs) are also available on the CCBS website.

If you need further information or assistance please email the CCBS Administration Team at ccbsinfo@bankofengland.co.uk.

Application process

All candidates must obtain prior approval from their training department before applying.

Applications must be received by the stated deadline and are limited to one per central bank/regulatory authority. As most events are oversubscribed and places are limited, we are not able to consider late or multiple applications.

Registration

If you are a first-time user of the electronic application system, you need to register on the CCBS website, using your official email address. A password will then be emailed to you. Once registered you can monitor the progress of your application and apply for other CCBS events.

Online application

After registering with the CCBS and having obtained a password you should:

1. go to the CCBS website and sign in with your username (your official email address) and password;
2. select the relevant event and click on ‘Apply Now’;
3. complete all sections of the application form; and
4. submit the application form.

You will be informed by email whether your application has been successful at least two to three months before an event.

The CCBS advises not to book any travel arrangements before your application has been accepted.
Practical information

Administration form
The administration form should be completed and submitted once your travel arrangements are final. You will receive an acknowledgement by email. Please use this form to give details of any dietary and special requirements. **It is essential that you provide contact details for your stay in the United Kingdom** to enable us to contact you outside event hours, should the need arise.

Administrative information
Successful applicants can download from the CCBS website the event programme, list of participants and location maps.

Accommodation
Participants will need to make their own arrangements for accommodation. A list of hotels recommended by previous participants is available at [www.bankofengland.co.uk/education/pages/ccbs/admininfo.aspx](http://www.bankofengland.co.uk/education/pages/ccbs/admininfo.aspx).

For events by invitation only CCBS will organise hotel accommodation.

Visas
If you require a visa to visit the United Kingdom, you are **strongly advised to contact the relevant British Embassy or British High Commission as soon as you are accepted on the event** to ensure that the necessary formalities are completed in time. For further information please visit [www.visa4uk.fco.gov.uk](http://www.visa4uk.fco.gov.uk).

Costs
The Bank of England makes no charge for tuition, and we provide lunch and refreshments and organise some social activities. Participants and their central banks are responsible for their own travel expenses, accommodation and other daily living costs (approximately £35 a day). Please note that the CCBS does not arrange transfers to and from airports.

Travel and medical insurance
The Bank of England does not provide any insurance cover for participants travelling to/from or staying in London. Please ensure that you have adequate insurance cover for your needs. You should also ensure you have adequate medical insurance. Any medical costs incurred in the United Kingdom will have to be met by you or your central bank.

Working hours
The normal working day on our seminars is from 9.00am to 5.30pm. Because of the highly interactive nature of our events, all participants are expected to be present for the entire duration of the event, and should not accept any extra-curricular assignments/appointments.

Special requirements
If you have any special needs or requirements, eg a disability, dietary needs or religious requirements, please ensure that this information is set out in the administration form to ensure that your needs can be accommodated as fully as possible.

Dress code
Normal business attire.
CCBS events abroad

The CCBS has a large programme of activities abroad. These include seminars, research workshops, conferences and visits by our experts for on-site technical advice.

Most CCBS seminars abroad are organised jointly with the host central bank/regulatory authority or with regional training institutions and are attended by participants from a number of countries in the region. A few seminars and our expert visits are geared to the specific needs of an individual central bank.

We welcome requests from central banks or regulatory and supervisory authorities to provide or contribute to such events. We appreciate as much notice as possible as international events may require a lead time of several months.

Seminars

The CCBS has a large programme of seminars overseas. Most last three to five days. Many are regional seminars, hosted by one central bank or training institution, and attended by a number of central banks in the region. These seminars are more focused on specific regional concerns, tend to be less costly for participants to attend than events in London, and promote the sharing of experience and networking within the region. Some seminars are tailor-made to the specific needs of one central bank.

CCBS seminars may be translated into a local language so that they can reach a wider audience than is possible for English speaking seminars. This is the responsibility of the host organisation.
Research workshops and conferences
Research workshops are usually organised jointly with the host central bank, and attended by research staff from several other central banks. The format consists of presentation and discussion of papers by participants, with some lectures or papers presented by CCBS personnel. CCBS also co-organises a small number of international conferences jointly with other central banks. CCBS staff are also willing to speak at seminars organised by central banks or related training institutions abroad.

Expert advice
CCBS personnel may visit central banks or regulatory authorities overseas, upon their specific request, to assist them in a particular area. The format is usually more akin to consultancy and often includes discussions with Board members and senior staff, or with technical experts, as opposed to a workshop or seminar with formal presentations.

Funding
The CCBS does not make any charge for staff time or for the materials that are provided on overseas events. We have a flexible cost-sharing policy and look to the host institution to cover some or all costs incurred by CCBS lecturers such as local accommodation and air travel.
CCBS publications

The CCBS places considerable emphasis on excellent academic research related to all aspects of central banking. Our interests are many and varied, with an emphasis on applied research but encompassing many aspects of econometrics and economic theory. We publish some research work through our series of Handbooks and Joint Research Papers (see below). The CCBS also publishes more specialist publications, and the output from research workshops in edited books, listed below. CCBS often provides research advice to participants.

**Handbooks in Central Banking**

The text of all CCBS Handbooks can be downloaded from our website at [www.bankofengland.co.uk/education/ccbs/handbooks_lectures.htm](http://www.bankofengland.co.uk/education/ccbs/handbooks_lectures.htm).

The Bank of England retains copyright of the Handbooks. Permission to reproduce them, in English or in local translation, should be applied for in advance from the CCBS.

Some Handbooks are available in Arabic (A), Armenian (AM), Russian (R) and Spanish (S).

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**Handbooks: Technical series**

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**Joint Research Papers**

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Books


CCBS staff

The Centre has a small permanent staff, headed by the Director, Gill Hammond and two Senior Advisers, David Barr and Andrew Blake. CCBS also draws on experts from other areas of the Bank of England and external speakers from academia and financial institutions on our seminars. If you wish to contact any CCBS member of staff please email ccbsinfo@bankofengland.co.uk.

Gill Hammond
Gill was appointed Director of the CCBS in June 2008, having previously served as Deputy Director since 2000. She joined the Bank in 1981 and has many years of experience as a senior manager on international economic and monetary policy issues. Her main interest at the CCBS is monetary policy, particularly inflation targeting in diverse economies. She has several publications on these and other topics and has given lectures at more than sixty central banks around the world. Gill has a Master’s degree in economics from Cambridge University.

[Website link]

Andrew Blake
Andrew has been with the Bank since 2002 when he first joined the CCBS. He has since returned after a period in the Monetary Analysis area. Previously he worked both in academia and at the National Institute of Economic and Social Research. His research covers a variety of areas, but he is most interested in monetary policy, expectations and time series econometrics, and has published widely on these and other topics. He holds degrees from the Universities of Liverpool, Essex and London.

[Website link]

David Barr
David joined the CCBS in June 2013. He originally joined the Bank after completing his PhD at the LSE and worked as an economist on monetary policy and financial analysis before managing a portfolio of the United Kingdom’s foreign currency reserves. He then moved into academia as a Professor of finance at Imperial College and Durham University before returning to join the Bank’s Financial Stability directorate in 2012. His areas of expertise include asset pricing, financial contagion, flow of funds modelling, and interest rate derivatives.

[Website link]
CCBS Event Directors

Pawel Zabczyk
Pawel joined the CCBS in June 2013, but has been working at the Bank since 2002. Prior to joining CCBS, Pawel worked in the Monetary Analysis and Financial Stability areas of the Bank, and he also spent two years on secondment to the European Central Bank. His research interests include macro-finance and computational economics, and he has published on these and other topics. Pawel holds a PhD in financial economics from the University of Glasgow and an MA degree in economics from the Delhi School of Economics.

Paul Singh
Paul joined CCBS in July 2014 after working at the Prudential Regulation Authority, Bank of England and its predecessor, the Financial Services Authority, for four years. He has worked as a supervisor with direct responsibility for the regulation of international insurance firms, asset managers and large US investment banks. His focus was the identification and assessment of risks to the firms, and the continuous monitoring of firms to ensure the stability of the UK financial system. Paul holds a BSc in chemistry and an MSc in synthetic organic chemistry from the University of Sussex.

Somnath Chatterjee
Somnath joined the CCBS in January 2013, but has been working in the Financial Stability directorate of the Bank since 2011. Prior to joining the Bank, Somnath worked in HM Treasury where he was involved in much of the analysis that underpinned the major financial sector interventions that took place during the height of the financial crisis. His current interests are in macroprudential policy and assessing systemic risk. He holds a PhD in financial economics from the University of Glasgow and an MA degree in economics from the Delhi School of Economics.

Gabor Pinter
Gabor joined the Bank of England in 2011, working in the Financial Stability and Monetary Analysis areas. Previously, he worked at the International Monetary Fund, HM Treasury, the Central Bank of Hungary and the European Parliament. His research interests include macroeconomics, financial intermediation and applied macroeconometrics. He studied Economics in Budapest and Cardiff, and Mathematics at King’s College and holds a PhD from the University of Cambridge.

Matthew Pegg
Matthew joined the CCBS in June 2013, and has been with the United Kingdom’s Prudential Regulation Authority and Financial Services Authority since 2001. He has worked on the design and implementation of the Prudential Regulation Authority’s approach to supervision, and the Financial Services Authority’s risk-based approach to regulation, ARROW II. During his time at the Financial Services Authority Matthew worked in Risk Management focusing on aggregate firm risk management and reporting, and also as a supervisor of investment firms. Matthew holds a BA in Economics from Manchester Metropolitan University.

Garreth Rule
Garreth joined the CCBS in October 2009, but has been working at the Bank since 2002. Prior to joining CCBS, Garreth worked in both the Markets and Financial Stability areas of the Bank. During his time in the Markets area he worked first on the Bank’s sterling monetary operations, and later on the Bank’s Market Intelligence gathering programme. He holds a BSc in Economics from Bath University and an MSc in Economics and Financial Economics from Nottingham University. [www.bankofengland.co.uk/research/Pages/economists/staff/garreth_rule.aspx](http://www.bankofengland.co.uk/research/Pages/economists/staff/garreth_rule.aspx).

Ole Rummel
Ole has been with the Bank of England since 1999, working in the Financial Stability, Markets and Monetary Analysis areas. He previously worked in investment banking and for the European Investment Bank in Luxembourg. Ole joined CCBS in October 2006 and is interested in econometric modelling, financial stability and financial markets. His research work has been published in several journals as well as the Bank’s Financial Stability Review and Quarterly Bulletin. He holds a PhD in economics from the University of Strathclyde and a BA degree in quantitative economics from Stanford University.

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London events in 2015 by date

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*This event is by invitation only.